

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

BARKAN WIRELESS IP HOLDINGS, L.P.,	§	
	§	
v.	§	CASE NO. 2:21-CV-34-JRG
	§	
T-MOBILE US, INC., T-MOBILE USA,	§	
INC., and NOKIA OF AMERICA	§	
CORPORATION	§	

CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

On August 16, 2021, the Court held a hearing to determine the proper construction of disputed terms in United States Patents No. 8,014,284, 8,559,312, and 9,392,638. Before the Court is the Opening Claim Construction Brief (Dkt. No. 78) filed by Plaintiff Barkan Wireless IP Holdings, L.P. (“Plaintiff” or “Barkan”). Also before the Court is the Responsive Claim Construction Brief (Dkt. No. 90) filed by Defendants T-Mobile US, Inc. and T-Mobile USA Inc. (“T-Mobile”) and Nokia Corporation of America (“Nokia”) (collectively, “Defendants”) as well as Plaintiff’s reply (Dkt. No. 75). Further before the Court are the parties’ joint claim construction charts filed pursuant to Local Patent Rule (“P.R.”) 4-3 (Dkt. No. 74, Ex. A) and P.R. 4-5(d) (Dkt. No. 96-1). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing, having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Memorandum and Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

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I. BACKGROUND

Plaintiff alleges infringement of United States Patents No. 8,014,284 (“the ’284 Patent”), 8,559,312 (“the ’312 Patent”), and 9,392,638 (“the ’638 Patent”) (collectively, the “patents-in-suit”). Dkt. No. 78, Exs. A–C. The ’284 Patent, titled “Cellular Network System and Method,” issued on September 6, 2011, bears a filing date of June 4, 2001, and bears an earliest priority date of August 12, 1999. Plaintiff submits that “[t]he Patents-in-Suit disclose inventions designed to expand the reach of cellular networks through the use of ‘add-on’ transceiver devices—‘base stations’—that consumers install by connecting to existing Internet Protocol (‘IP’) based infrastructure in their homes or businesses.” Defendants submit that “the Asserted Patents claim a specific type of ‘add-on base station’/‘gateway,’” and “the claimed ‘add-on base stations’/‘gateways’ incentivize owners to expand cellular coverage by providing a mechanism to compensate owners of add-on base stations for facilitating that coverage.” Dkt. No. 90 at 1.

The Abstract of the '284 Patent states:

In a cellular network system, an add-on base station comprising: A. a first channel for connecting to a customer's phone; B. a second channel for connecting to a network; C. circuits for connecting the customer's phone to a destination on the network; and D. billing means for collecting a payment for services related to connecting the customer's phone to the network. The customer's phone may be connected through a wireless link. A method to establish a link between a caller and an addressee comprising the steps of: A. The caller sends a request to a cellular center requesting to connect to a specific addressee, using a message encrypted with the public key of the center; B. the center decrypts the message, identifies the caller and the addressee; C. the center composes a message for the addressee and encrypts it with the public key of the addressee. The message is then sent to base stations; D. the base station transmits the message "as is" or in a modified form; E. only the designated addressee will be capable to decrypt the message, and will be thus notified of the attempted connection.

The '312 Patent resulted from a continuation of the '284 Patent, and the '638 Patent resulted from a continuation of the '312 Patent. The patents-in-suit therefore share a common specification. Dkt. No. 78 at 1.

The Court previously construed disputed terms in the patents-in-suit in:

Barkan Wireless IP Holdings, L.P. v. Samsung Electronics Co., Ltd., et al., No. 2:18-CV-28, Dkt. No. 105 (E.D. Tex. Feb. 7, 2019) (Payne, J.) ("*Samsung*"), *objections overruled*, Dkt. No. 118 (E.D. Tex. Mar. 5, 2019) (Gilstrap, J.); and

Barkan Wireless IP Holdings, L.P. v. Sprint Communications Co., L.P., et al., No. 2:19-CV-336, Dkt. No. 144 (E.D. Tex. Oct. 26, 2020) (Payne, J.) ("*Sprint*"), *objections overruled*, Dkt. No. 172 (E.D. Tex. Dec. 8, 2020) (Gilstrap, J.).

Shortly before the start of the August 16, 2021 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties' arguments and facilitating discussion. Those preliminary constructions are noted below within the discussion for each term.

II. LEGAL PRINCIPLES

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips*, 415 F.3d at 1312 (quoting

Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). “In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841 (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See Phillips*, 415 F.3d at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *accord Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.*

Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); accord *Teleflex, Inc. v. Ficos N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); accord *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc. v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). “[T]he prosecution

history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

“[P]rior orders in related cases do not bar the Court from conducting additional construction in order to refine earlier claim constructions.” *TQP Dev., LLC v. Intuit Inc.*, No. 2:12-CV-180-WCB, 2014 WL 2810016, at *6 (E.D. Tex. June 20, 2014) (Bryson, J., sitting by designation).

In general, however, prior claim construction proceedings involving the same patents-in-suit are “entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se*.” *Maurice Mitchell Innovations, LP v. Intel Corp.*, No. 2:04-CV-450, 2006 WL 1751779, at *4 (E.D. Tex. June 21, 2006) (Davis, J.); *see TQP*, 2014 WL 2810016, at *6 (“[P]revious

claim constructions in cases involving the same patent are entitled to substantial weight, and the Court has determined that it will not depart from those constructions absent a strong reason for doing so.”); *see also Teva*, 135 S. Ct. at 839–40 (“prior cases will sometimes be binding because of issue preclusion and sometimes will serve as persuasive authority”) (citation omitted); *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008) (noting “the importance of uniformity in the treatment of a given patent”) (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996)).

III. AGREED TERMS

The parties reached agreement on constructions as stated in their May 11, 2021 Joint P.R. 4-3 Claim Construction and Prehearing Statement (Dkt. No. 61 at 1–2) and their July 26, 2021 Supplemental Joint P.R. 4-3 Claim Construction and Prehearing Statement (Dkt. No. 91 at 2–3). Those agreements are set forth in Appendix A to the present Claim Construction Memorandum and Order. The parties’ subsequent August 15, 2021 Joint Notice of Narrowing of Claim Construction Disputes (Dkt. No. 110) is addressed as to particular terms herein.

IV. DISPUTED TERMS

A. “add-on base station”

<p style="text-align: center;">“add-on base station”</p> <p style="text-align: center;">(’638 Patent, All Claims)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“a base station that uses the pre-existing network infrastructure of one network to provide additional coverage for another network”	“[a/the] base station that can be added to a public network and can accept payment for use of the base station”

Dkt. No. 74, Ex. A at 1; Dkt. No. 78 at 2; Dkt. No. 90 at 20; Dkt. No. 96-1 at 1.

Shortly before the start of the August 16, 2021 hearing, the Court provided the parties with the following preliminary construction: “a base station that uses the pre-existing network infrastructure of one network to provide additional coverage for another network.”

(1) The Parties’ Positions

Plaintiff submits that whereas Plaintiff proposes the *Sprint* construction, Defendants propose a construction that *Sprint* rejected. Dkt. No. 78 at 2–6. Plaintiff argues that “[t]here is nothing in the specification that says the claimed add-on base station must be added to a public network, as opposed to a private network.” *Id.* at 3. Plaintiff also argues that “the specification consistently describes the ability to accept payment as optional, not mandatory,” and “[t]he requirement that the coordination center (at the server) be able to disseminate a price policy has no impact on whether the base station must accept payment.” *Id.* at 5 & 6.

Defendants submit that they propose the same construction proposed by the *Sprint* defendants, and “[b]ecause the term ‘add-on base station’ is a coined term without a plain meaning outside of the context of the Asserted Patents, the Court should adopt Defendants’ proposed construction.” Dkt. No. 90 at 21. Defendants argue:

The same analysis for the coined term “coordination center” applies to the related coined term “add-on base station.” In the Asserted Patents, the corollary of the allegedly “novel” “coordination center” that *determines and disseminates a pricing policy* is the allegedly “novel” “add-on base station” claimed in the ’638 Patent that can *accept payment* for use of the base station based on the disseminated pricing policy.

Id. (citation omitted); *see id.* at 21–24.

Plaintiff replies that *Sprint* found that the defendants in that case “fail[ed] to demonstrate that an ‘add-on base station’ that accepts payments is a necessary ‘corollary’ to a ‘coordination center’ that determines and disseminates a price policy,” and “paying a base station is identified as an ‘example’” of accepting payment. Dkt. No. 92 at 2 (quoting *Sprint* at 16).

At the August 16, 2021 hearing, Defendants acknowledged that the term “add-on base station” may have some ordinary meaning in general, but Defendants argued that in the context of the patents-in-suit this term refers to a specific type of device as described in the specification. Defendants also argued that Plaintiff’s reliance on Figure 3 should be rejected because although Figure 3 (unlike Figure 2) does not illustrate a billing unit, Figure 3 is a higher-level diagram that shows external connections rather than internal components. Defendants also noted that the Abstracts of the ’284 Patent and the ’312 Patent refer to an add-on base station having a billing means for collecting payment. Defendants submitted that although the Abstract of the ’638 Patent does not include this same language, the ’638 Patent has the same specification as the ’284 Patent and the ’312 Patent.

Plaintiff responded that Claim 17 of the ’638 Patent, for example, recites various features shown in Figure 2 but does not recite a billing unit.

(2) Analysis

Sprint construed “add-on base station” to mean “a base station that uses the pre-existing network infrastructure of one network to provide additional coverage for another network.” *See Sprint* at 10–22.

Sprint addressed substantially the same arguments that Defendants submit in the present case, and *Sprint* found, for example:

[T]he above-reproduced disclosures—such as that the “novel *system*” can “include means for collecting a payment” ([’638 Patent] at 5:31–35 (emphasis added))—allow for payment to be accepted through some other part of the system (to whatever extent payment is required), rather than necessarily being accepted through the “add-on base station.” * * * This is also consistent with disclosure that “[a]dd-on base stations can be installed and owned by the cellular network operator.” *Id.* at 7:23–24. Further, as Plaintiff points out in its reply brief . . . , no claim of the ’638 Patent recites payment or billing.

As to the Court’s finding in *Samsung* that a “coordination center” “determines and disseminates a price policy” (*Samsung* at 24), Defendants fail to demonstrate that an “add-on base station” that accepts payment is a necessary “corollary” to a “coordination center” that determines and disseminates a price policy.

The Court therefore rejects Defendants’ proposal that an “add-on base station” must “accept payment for use of the base station.”

* * *

Above-reproduced Claim 1 of the ’638 Patent, for example, recites interacting with “the public Internet,” but Defendants fail to support their proposal of limiting the term “add-on base stations” to being added to a “public” network. The above-discussed disclosures, such as regarding “providing an incentive to the *public* to acquire and operate” base stations (’638 Patent at 2:50–61 (emphasis added)), is insufficient to limit add-on base stations to being added to a public network.

Id. at 16 & 20 (citations omitted).

Defendants do not persuasively justify departing from the *Sprint* construction. Additional disclosures cited here by Defendants do not compel otherwise. *See* ’638 Patent at 10:59–11:6 (“FIG. 2 details, by way of example, the functional structure of a novel base station (like base station 41, 42 or 43 of FIG. 1). * * * A billing processor 55 computes the fee or payment the base station owner is entitled to”); *see also id.* at 10:62–64 & Fig. 2.

Also, Defendants argue that the disclosure that “[a]dd-on base stations can be installed and owned by the cellular network operator” (*id.* at 7:23–24) is not inconsistent with Defendants’ proposal that the add-on base stations must be able to accept payment, but this disclosure nonetheless provides additional support for the finding in *Sprint* that “payment [can] be accepted through some other part of the system (to whatever extent payment is required), rather than necessarily being accepted through the ‘add-on base station.’” *Sprint* at 16. This disclosure also undercuts Defendants’ reliance on disclosure that “[a]n important aspect of the present invention is the means for paying to the owner of the add-on base station for his/her services” because the immediately following sentence states that “[t]his provides the incentive for acquiring and

operating these base stations.” ’284 Patent at 9:49–52. That is, this “important aspect” appears less definitive when read in connection with an “incentive” that does not appear to be applicable, or at least is substantially less applicable, in the context of add-on base stations “installed and owned by the cellular network operator.” *Id.* at 7:23–24.

The Court therefore hereby construes **“add-on base station”** to mean **“a base station that uses the pre-existing network infrastructure of one network to provide additional coverage for another network.”**

B. “coordination center”

<p>“coordination center”</p> <p>(’284 Patent, All Claims; ’312 Patent, Claims 2, 4–11, 13–21, 23–55)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“center that provides information over the packet-based data network required for making a call, but which does not perform the actual call switching”	“center that does not participate in the actual call routing but that provides information required for making a call and that determines and disseminates to [the/a] gateway a price policy, which defines the cost for each operation over the network”

Dkt. No. 74, Ex. A at 2; Dkt. No. 78 at 7; Dkt. No. 90 at 3; Dkt. No. 96-1 at 5.

Shortly before the start of the August 16, 2021 hearing, the Court provided the parties with the following preliminary construction: “center that does not participate in the actual call routing but that provides information required for making a call and that determines and disseminates a price policy.”

(1) The Parties' Positions

“Barkan respectfully reraises its prior arguments that the ‘determines and disseminates a price policy’ requirement is an improper importation of a limitation from a specification embodiment to preserve the issue for appeal.” Dkt. No. 78 at 7; *see id.* at 2 & 8–12. For example, Plaintiff argues: “The claim language, specification, and prosecution histories do not require that the coordination center determine or disseminate a pricing policy. In fact, the ‘pricing policy’ limitation was explicitly removed during the ’284 prosecution from claims relating to the coordination center and placed into different, dependent claims that relate to another claim term (consideration-related policy database).” *Id.* at 9. Plaintiff also argues:

Barkan also respectfully requests that the Court reject Defendants’ proposed construction requiring that the coordination center “not participate in the actual call *routing*,” and instead proposes that the Court hold that the center “does not perform the actual call *switching*.” The specification repeatedly provides that the coordination center does not perform call *switching*, and that provided the basis for the patentee’s distinctions over prior art.

Finally, Barkan respectfully requests that the Court reject Defendants’ attempts to alter the Court’s prior constructions. First, Defendants ask the Court to construe “coordination center” to require that the “price policy” be disseminated to the gateway. That limitation conflicts with certain specification embodiments and should be rejected. Second, Defendants ask the Court to construe and define “price policy” to mean “the cost of each operation over the network.” The Court did not previously construe “price policy” to have that meaning, and there is no reason to do so here: such a limitation is unsupported by the claim language or specification.

Id. at 7–8; *see id.* at 12–14.

Defendants respond that “[t]he change proposed by Defendants further clarifies the claim scope in response to Plaintiff’s ever-shifting theories.” Dkt. No. 90 at 2. Defendants argue:

Despite the Court’s clarifying construction, the parties in the Sprint Case continued to dispute the meaning of “coordination center” until the eve of trial because Barkan took the position that the “coordination center” need not disseminate a price policy to the gateway. *See Ex. 7* at 1, 16. The intrinsic record, however, makes clear that the price policy disseminated by the

coordination center must be transmitted to the gateway and must include the cost of each operation in the network.

Id. at 3. Defendants urge that “the specification, prosecution history, and the context of the invention itself make clear that the price policy—which is stored by the gateway and used to offer economic incentives to customers—must be disseminated to the ‘gateway,’” and “[i]n the Sprint Case, Barkan interpreted ‘price policy’ to cover information wholly unrelated to pricing.” *Id.* at 4; *see id.* at 4–11. For example, Defendants argue that “[g]iven that [the] coordination center ‘determines and disseminates’ the price policy and the gateway receives information from the coordination center, it is nonsensical that the price policy would not be among that information.” *Id.* at 5. Defendants also submit that “[a]s this Court has previously recognized, ‘coordination center’ is a coined term.” *Id.* at 11. Finally, Defendants note that “[i]n the Sprint Case, Barkan actually argued *against* the construction that it proposes here” as to “switching.” *Id.* at 13.

Plaintiff replies:

Absent lexicography or prosecution disclaimer (neither of which applies here), it is improper to import embodiment limitations into the claims. Accordingly, the Court should reject Defendants’ construction requiring both direct dissemination of a price policy from the coordination center to the gateway and that the price policy define the cost of network operations.

Dkt. No. 92 at 3. For example, Plaintiff argues that Defendants “presume that if some information is provided from the coordination center to the gateway, then *all information* determined and disseminated by the coordination center must also be disseminated to the gateway,” “[b]ut Defendants do not point to any language or offer any reason that must be the case.” *Id.* at 4. Plaintiff also argues that “a price policy can include information generally about the price of the use of the network, token allotments, and fees for certain quantities of traffic,” and “[a]ll of these are different than the ‘cost for each operation over the network.’” *Id.* at 6.

At the August 16, 2021 hearing, Defendants argued that although the price policy need not specify a price for each possible use, the price policy needs to set forth how much to charge for use of an add-on base station. Defendants likewise argued that whereas a subscription for using add-on base stations could perhaps be part of a price policy, a general subscription to a cellular carrier's network (which might include add-on base stations) would not be sufficiently related to use of add-on base stations. Further, Defendants urged that although the price policy can get to the gateway in any of a number of ways, the price policy cannot simply be stored on a database somewhere within the network. Rather, Defendants argued, the gateway must have and be able to use the price policy.

Plaintiff responded that the price policy needs to be available but need not actually be sent to the gateway, and a price policy need not define the cost of each operation over the network but rather can simply require a user to pay in some way. Plaintiff also argued that the disclosed coordination center has various optional features, some of which appear in dependent claims, such as Claim 9 of the '284 Patent reciting "operational status."

Defendants replied that the invention is directed not only to adding a feature but also to charging for that added feature, which Defendants argue is the point of the price policy.

(2) Analysis

Samsung construed "coordination center" to mean "center that provides information required for making a call and that determines and disseminates a price policy." *Samsung* at 18–24.

Sprint considered *Samsung* as well as the additional arguments presented in *Sprint* and construed "coordination center" to mean "center that does not participate in the actual call

routing but that provides information required for making a call and that determines and disseminates a price policy.” *Sprint* at 23–29.

(a) “routing” or “switching”

As to Plaintiff’s proposal, Plaintiff does not persuasively support replacing “routing” with “switching” in the construction. The Court declined to adopt such a proposal in *Sprint*, and the Court here adopts the prior constructions in this regard. *See Sprint* at 23; *see also* ’284 Patent at 6:61–64. Indeed, Plaintiff in its reply brief “does not oppose the use of ‘actual call routing’ in place of ‘actual call switching’ in its proposed construction.” Dkt. No. 92 at 7 n.2.

(b) “determines and disseminates a price policy”

The phrase “determines and disseminates a price policy” should be included in the construction for the reasons set forth in *Samsung* and *Sprint*. *See Sprint* at 26–28; *see, e.g.*, ’284 Patent at 6:21–24, 7:31–36 & 7:56–64. For example, *Samsung* rejected Plaintiff’s claim differentiation argument such as regarding dependent Claim 4 of the ’284 Patent. *See Samsung* at 20–21. Similarly, the prosecution history cited by Plaintiff regarding a “consideration-related policy database” does not persuasively justify departing from the Court’s prior construction as to “determines and disseminates a price policy.” *See* Dkt. No. 78, Ex. F, Dec. 16, 2010 Amendment at 2. Additional disclosures cited by Plaintiff, such as coordination centers being involved in network operation and management, are likewise unpersuasive. *See* ’284 Patent at 7:40–55, 7:65–67, 8:1–5 & 9:21–40.

(c) “to [the/a] gateway”

Defendants do not persuasively support their proposal of “to [the/a] gateway,” particularly to whatever extent Defendants interpret their proposal as requiring affirmatively sending. For example, the disclosure that price policy information “*may* be transferred over an

Internet, or *may be available* to add-on base stations” does not support Defendants’ proposal and perhaps instead rebuts it by expressly referring to “availab[ility].” ’284 Patent at 7:58–59 (emphasis added). And although Defendants cite the disclosure of “billing unit 55” shown in Figure 2, *Sprint* expressly found that “[t]his example, however, should not be imported into the term ‘add-on base station.’” *Sprint* at 16.

Finally, Defendants rely on disclosure regarding “publish[ing]” cost information:

The cellular center is responsible for the price policy. It determines and publishes the cost of each operation over the network.

’284 Patent at 7:56–58. This disclosure regarding “publishes,” however, does not compel finding that the “coordination center” must send such information to the gateway. Instead, the specification discloses that “[t]he information may be dispersed between units in the network,” and “[t]hus, the new price list or policy will gradually expand throughout the network.” *Id.* at 7:60–64; *see id.* at ’284 Patent at 10:27–35 (“This [billing] policy would be stored in all base stations and phones”; “When two units interact, they can compare the time stamps or the version of the policy held by each unit. Thus the policy is updated as necessary and there would not be any dispute between the parties.”). The *Samsung* and *Sprint* constructions already recite “determines and disseminates.” Defendants’ proposal of “to [the/a] gateway” would therefore, at best, tend to confuse rather than clarify the scope of the claims.

Defendants also cite Plaintiff’s response to a summary judgment motion in *Sprint*, in which Plaintiff argued “[n]othing in the Court’s construction or discussion of the term ‘coordination center’ requires or even implies that the ‘price policy’ must be sent to the femtocell or used directly by the femtocell, as opposed to being used by another device or server in the claimed system.” Dkt. No. 90, Ex. 7, Dec. 21, 2020 Response to Sprint’s MSJ of Noninfringement of “Coordination Center” Claims at 10–11.

At least for purposes of the present claim construction proceedings, however, any such issue regarding applying the “determines and disseminates” requirement to the accused instrumentalities relates to questions of fact rather than any question of law for claim construction. *See PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact”); *see also Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“[t]he resolution of some line-drawing problems . . . is properly left to the trier of fact”) (citing *PPG*, 156 F.3d at 1355); *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1318–19 (Fed. Cir. 2016) (citing *PPG*, 156 F.3d at 1355; citing *Acumed*, 483 F.3d at 806). Also, Defendants themselves submit that the pricing policy could be disseminated “indirectly.” Dkt. No. 90 at 8.

Defendants’ reliance on “the purpose of the invention’ of incentivizing ownership” is similarly unavailing. Dkt. No. 90 at 5 (quoting *Pioneer Corp. v. Samsung SDI Co.*, No. 2:06-CV-384, 2007 U.S. Dist. LEXIS 97894, 2007 WL 5688764, at *14 (E.D. Tex. Dec. 27, 2007) (Folsom, J.)). Defendants’ concerns underlying their proposal of “to [the/a] gateway” pertain to questions of fact rather than any question of law for claim construction. *See PPG*, 156 F.3d at 1355. Moreover, the disclosure that base stations “can be installed and owned by the cellular network operator” further undercuts Defendants’ argument in this regard because such a scenario would not appear to involve incentivizing individuals to install base stations. ’284 Patent at 7:17–18.

The statement by Plaintiff in its opening claim construction brief that “[t]he claims require that the coordination center provide information over the packet-based data network to the gateway’s controller” does not compel otherwise. *See* Dkt. No. 78 at 8 (citing claim 1 of the ’284 Patent). Defendants do not show that this “information” necessarily includes a price policy. The prosecution history cited by Defendants, in which the patentee stated that “the billing policy is then disseminated,” is also unpersuasive because “disseminates” is already part of the Court’s construction as discussed above. Dkt. No. 90, Ex. 6, Oct. 16, 2005 Amendment at 6 (“Our disclosure teaches that the billing policy is then disseminated between the entities in the system, such that a handset can automatically pay the base stations that serve it (the payment can be made for example by using digital tokens).”).

The Court therefore rejects Defendants’ proposal of “to [the/a] gateway.”

(d) “defines the cost for each operation over the network”

As to Defendants’ proposal that the “price policy” necessarily “defines the cost for each operation over the network,” the specification discloses:

The novel centers are also responsible for price setting, as determined by an operator there. The information regarding prices of use of the net and additional, private base stations, is disseminated as digital documents encrypted so as to prevent tampering with.

* * *

The cellular center is responsible for the price policy. It determines and publishes the cost of each operation over the network. . . .

. . . In each transaction, the parties thereto will check the date of each price list. The more updated price list will be transferred to the other party.

’284 Patent at 6:21–25 & 7:56–64; *id.* at 15:24–27 (“Billing in this case is by the receiver phone, or otherwise as set by policy of the cellular center. It is possible that the caller would pay for the

tokens, if the phone company *bills him for their cost*, and sends that amount to the cellular center.”) (emphasis added).

Although these disclosures refer to billing for the cost of particular operations, Defendants do not persuasively support their proposal that the “price policy” necessarily “defines the cost for each operation over the network.” Instead, this is a specific feature of particular disclosed embodiments that should not be imported into the claims. *See Phillips*, 415 F.3d at 1323.

Also, disclosures cited by Defendants regarding “tokens” are not specific to “each operation” and thus do not persuasively support Defendants’ proposed construction in that regard. *See* ’284 Patent at 10:15–17 (“When originating a call, or otherwise as stated in the cellular center policy, the phone would send tokens to the base stations in the way to the other phone.”); *see also id.* at 10:27–40 (“This policy would be stored in all base stations and phones, and they set the prices (by means of tokens) that the phones pay.”); *id.* at 10:64–67 (“A billing processor 55 computes the fee or payment the base station owner is entitled to, according to the *amount of traffic* on the channels 51, 52, and the method or policy as set in the billing document.”) (emphasis added). Defendants further do not persuasively support their contention that “includ[ing] merely information suggesting that a subscriber is authorized would eviscerate the entire meaning of a ‘*price policy*’ because such information conveys nothing about the *price* of a transaction.” Dkt. No. 90 at 11.

Defendants’ reliance on Plaintiff’s response to a motion for summary judgment in *Sprint* is also unavailing. Plaintiff argued against “Sprint now contend[ing] that the coordination center need not only determine and disseminate a ‘price policy’ (the construction Sprint sought, which the Court adopted), but needs to also ‘determine[] and publish[] the *cost for each operation over*

the network.” Dkt. No. 90, Ex. 7, Dec. 21, 2020 Response to Sprint’s MSJ of Noninfringement of “Coordination Center” Claims at 16. Plaintiff argued that “the jury is entitled to decide whether information used to correlate a paid up subscriber with the accused products is a ‘price policy.’” *Id.* at 16–17. This issue pertains to specific implementation details of accused instrumentalities that present questions of fact for the finder of fact rather than a question of law for claim construction. *See PPG*, 156 F.3d at 1355 (quoted above).

Finally, Defendants cite prosecution history of the ’284 Patent in which the patentee stated: “As is well known, in most cellular network architectures the billing database (i.e. consideration related database) and the authentication database are not the same.” Dkt. No. 90, Ex. 10, Mar. 1, 2010 Amendment at 6; *see id.* (“the description of the Xu reference’s authentication server makes no mention of consideration related policies”). Defendants also cite another office action response during the same prosecution in which the patentee stated:

Niot et al. (US 6,028,849) teaches the existence of an authentication module in the base station. However, Claim 24 deals with the Center publishing the billing criteria, or billing policy in the system. Our disclosure teaches that the billing policy is then disseminated between the entities in the system, such that a handset can automatically pay the base stations that serve it (the payment can be made for example by using digital tokens). In this case, authentication to the base station is not needed, as the handset pays the base station, and the identity of the handset is not important (as long as it pays).

Id., Ex. 6, Oct. 16, 2005 Amendment at 6.

These statements do not rise to the level of a clear and unmistakable disclaimer or a definitive statement that would warrant imposing the limitation proposed by Defendants (that the “price policy” cannot pertain to a general authorization for use but rather necessarily “defines the cost for each operation over the network”). *See Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on

definitive statements made during prosecution.”) (emphasis added). Indeed, *Sprint* distinguished between the “coordination center” and the “consideration-related policy database.” *Sprint* at 23–31. Defendants rely on this prosecution history to argue that “Barkan’s attempt to broaden the interpretation of ‘price policy’ now to include authentication should be rejected,” but this pertains to specific implementation details of particular accused instrumentalities that present questions of fact for the finder of fact rather than a question of law for claim construction. *See PPG*, 156 F.3d at 1355 (quoted above).

The Court therefore rejects Defendants’ proposal of “defines the cost for each operation over the network.”

(e) Construction

Based on all of the foregoing, the Court hereby construes **“coordination center”** to mean **“center that does not participate in the actual call routing but that provides information required for making a call and that determines and disseminates a price policy.”**

C. “public internet”

<p>“public internet”</p> <p>(’312 Patent, Claims 15–18, 21, 25–27, 30–31, 41–43, 47–48; ’638 Patent, All Claims)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain meaning / No construction necessary	“network formed by devices that are assigned public IP addresses”

Dkt. No. 74, Ex. A at 7; Dkt. No. 78 at 14.

“Defendants agree that . . . ‘public Internet’ should be construed according to its plain and ordinary meaning.” Dkt. No. 90 at 20; *see id.* at 25; *see also* Dkt. No. 92 at 1. The parties

thus are now in agreement. *See* Dkt. No. 96-1 at 10; *see also* Dkt. No. 110 at 1. The Court includes this agreement in Appendix A to the present Claim Construction Memorandum and Order.

D. “tamper-free hardware” and “tamper-free unit”

<p style="text-align: center;">“tamper-free unit”</p> <p style="text-align: center;">“tamper-free hardware”</p> <p style="text-align: center;">(’312 Patent, Claim 13; ’638 Patent, Claims 1–16, 18–19, 28)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“mechanism/hardware designed to prevent or inhibit tampering”	“[hardware / unit] that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it”

Dkt. No. 74, Ex. A at 9; Dkt. No. 78 at 16; Dkt. No. 90 at 15; Dkt. No. 96-1 at 15.

The parties submit that because Plaintiff “is no longer asserting any claims containing the ‘tamper free’ limitations,” “th[e]se terms are no longer in dispute.” Dkt. No. 110 at 1.

The Court therefore does not further address these terms.

E. “unique identity bound to a cryptographic key”

<p style="text-align: center;">“unique identity bound to a cryptographic key”</p> <p style="text-align: center;">(’312 Patent, Claims 8–11, 13, 39–52)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“unique identity and a cryptographic key associated with one another”	“unique identity and a cryptographic key associated with one another in a certificate”

Dkt. No. 74, Ex. A at 12; Dkt. No. 78 at 19; Dkt. No. 90 at 17; Dkt. No. 96-1 at 15.

Shortly before the start of the August 16, 2021 hearing, the Court provided the parties with the following preliminary construction: “unique identity and a cryptographic key associated with one another in a certificate.”

(1) The Parties’ Positions

“Barkan respectfully reraises its prior arguments to preserve the issues for appeal.” Dkt. No. 78 at 2; *see id.* at 19–20. Plaintiff argues that “Barkan respectfully submits that the Court in *Samsung*, and again in *Sprint*, erred in importing a permissive limitation from a single embodiment into claim language when it construed ‘unique identity bound to a cryptographic key’ to require the ‘unique identity and a cryptographic key’ to be “associated with one another in a certificate.” Dkt. No. 78 at 19 (citing *Samsung* at 66 & *Sprint* at 52).

Defendants respond that “Barkan does not provide a compelling reason for changing a construction already twice construed.” Dkt. No. 90 at 18.

Plaintiff replies that “[t]he ’312 [Patent] claims never mention a certificate,” and “Defendants’ construction, adopted by the Court [in *Samsung* and *Sprint*], relies on a single embodiment described in permissive language.” Dkt. No. 92 at 8.

The parties agreed to waive oral argument and rest on their briefs as to this disputed term. Dkt. No. 110 at 1.

(2) Analysis

Samsung and *Sprint* construed “unique identity bound to a cryptographic key” to mean “unique identity and a cryptographic key associated with one another in a certificate.” *Samsung* at 62–66; *Sprint* at 50–52.

Plaintiff argues that *Samsung* and *Sprint* improperly imported a specific feature of a particular embodiment, but *Sprint* found that “what is permissive is that each phone, base station

and the cellular center 3 may have their own digital certificate.” *Sprint* at 52; *see Samsung* at 64–65; *see also* ’284 Patent at 8:9–11 (“Each phone, base station and the cellular center 3 may have their own digital certificate, which binds a cryptographic public key, with an identifier.”); *id.* at 9:34–38. Plaintiff does not persuasively justify departing from the analysis and construction set forth in *Samsung* and *Sprint*.

The Court hereby construes **“unique identity bound to a cryptographic key”** to mean **“unique identity and a cryptographic key associated with one another in a certificate.”**

F. “conduct encrypted communications”

<p>“conduct encrypted communications”</p> <p>(’284 Patent, Claim 15)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain meaning / No construction necessary	“encrypt communications [with said center] using the encryption key”

Dkt. No. 74, Ex. A at 15; Dkt. No. 78 at 20; Dkt. No. 90 at 25; Dkt. No. 96-1 at 16.

Shortly before the start of the August 16, 2021 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning” (“Reject: Defendants’ proposal of ‘using the encryption key’”).

(1) The Parties’ Positions

Plaintiff argues that “Defendants’ proposed construction is identical to the one the Court properly rejected in *Sprint*, and there is no reason to deviate from the Court’s prior construction here.” Dkt. No. 78 at 20. For example, Plaintiff argues that “the specification does not require or specify that encrypted communications must be conducted using ‘the encryption key’ of the claimed gateway,” and “[n]othing in the claim language requires that communications conducted

by the controller be encrypted “*using* the encryption key” of the claimed gateway and described in the first, separate limitation of Claim 15. *Id.* at 21.

Defendants submit that they “propose the prior construction proffered by Defendants in the Sprint Case,” and “Defendants respectfully submit that the Court erred” in *Sprint*. Dkt. No. 90 at 25. Defendants argue that whereas “the encryption key is a critical part of this claimed function,” “[a]s demonstrated by the claim language itself and the specification,” Plaintiff’s construction “improperly renders the claimed ‘encryption key’ superfluous.” *Id.* at 25 & 26.

Plaintiff replies that *Sprint* addressed Defendants’ arguments, and Plaintiff argues that Defendants fail to show any strong reason for departing from the *Sprint* analysis and construction. *See* Dkt. No. 92 at 8–9.

The parties agreed to waive oral argument and rest on their briefs as to this disputed term. Dkt. No. 110 at 1.

(2) Analysis

Sprint construed “conduct encrypted communications” to have its plain meaning, and *Sprint* rejected the proposal by the defendants in that case to require “using the encryption key.” *Sprint* at 55–61.

Defendants do not persuasively justify departing from the analysis and construction set forth in *Sprint*. *See id.* at 57–60. For example, *Sprint* found:

[W]hereas Claim 15 recites that the “controllers” conduct encrypted communications, the encryption key is recited as part of the “gateway” (the encryption key is contained in a unique number or digital document, which Claim 14 recites is part of the gateway), and the controllers are likewise recited as being merely part of the gateway. *See* ’284 Patent, Cls. 2, 14 & 15. In other words, the “encryption key” is recited as being part of something that is broader than just the “controllers” (and it is the controllers, specifically, that are recited as conducting encrypted communications).

Claim 15 thereby allows for the gateway's encryption key to be used with other claimed components, outside of "said controllers [being] further adapted to conduct encrypted communications with said center."

Sprint at 58.

The Court therefore hereby expressly rejects Defendants' proposed construction. No further construction is necessary. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims."); *see also Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) ("Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction."); *ActiveVideo Networks, Inc. v. Verizon Commcn's, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015).

The Court accordingly hereby construes "**conduct encrypted communications**" to have its **plain meaning**.

G. "adapted to"

<p style="text-align: center;">"adapted to"</p> <p style="text-align: center;">('284 Patent, Claims 4, 11, 15; '312 Patent, All Claims; '638 Patent, All Claims)</p>	
Plaintiff's Proposed Construction	Defendants' Proposed Construction
"configured to"	"configured to as opposed to mere capability to"

Dkt. No. 74, Ex. A at 15; Dkt. No. 78 at 22; Dkt. No. 90 at 18; Dkt. No. 96-1 at 17.

On the eve of the August 16, 2021 hearing in the present case, the parties reached agreement as follows:

The parties request that the Court construe the term “adapted to” using the same language from the *Sprint* case: “The Court therefore hereby construes ‘*adapted to*’ to mean ‘*configured to*,’ and in adopting this construction the Court hereby expressly relies on its understanding that ‘adapted to’ does not encompass mere capability.”

Dkt. No. 110 at 1; *see Sprint* at 66.

The Court therefore hereby construes “**adapted to**” to mean “**configured to**,” and in adopting this construction the Court hereby expressly relies on its understanding (*see Sprint* at 62–66) that “adapted to” does not encompass mere capability.

V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patent-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 26th day of September, 2021.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE

APPENDIX A

<u>Term</u>	<u>Parties' Agreement</u>
“consideration-related policy database” (’284 Patent, claims 4, 11, 19)	“a database on the Internet that stores information related to billing or pricing policies”
“route data” (’312 Patent, claims 14-21, 24-37, 40-54;)’638 Patent, all claims)	“send data toward a selected destination”
“connection regulator adapted to facilitate data flow” (’312 Patent, all claims)	“controller adapted to facilitate and regulate data flow”
“transmit recurrent updates” (’638 Patent, all claims)	“repeatedly send updates”
“recurrently issuing an operating license [operating authorization]” (’638 Patent, all claims)	“repeatedly issuing an operating license”
“a first interface to the public Internet and a second interface communicably coupled to a network of a telephone service provider” (’638 Patent, all claims)	“a first interface to the public Internet and a second interface coupled for communication with a network of a telephone service provider”
“A gateway to a packet-based data network” (’312 Patent, claim 1)	the full preamble is limiting
“gateway” (’284 Patent, all claims; ’312 Patent, all claims)	“a network device that facilitates communication between two or more networks”
“public internet”	No construction necessary

Dkt. No. 74 at 1–2; Dkt. No. 96-1 at 10.